

## WHAT IS CLAIMED IS:

1. An alcohol beverage dispensing apparatus comprising:
  - a keg having a self-contained bag filled with an alcohol beverage;
  - a pressure system adapted to maintain a gas pressure in the keg against the bag to assist in the dispensing of the beverage from the dispensing apparatus, the pressure system comprising:
    - a keg gas valve mounted to the keg to permit entry of pressurized gas into the keg;
    - a pressure reservoir mounted in the apparatus outside the keg and in fluid flow communication with the keg gas valve, the pressure reservoir storing a charge of pressurized gas and being adapted to supply at least a portion of the charge of pressurized gas into the keg through the keg gas valve when the dispensing apparatus is operated to dispense the beverage.
2. The alcohol beverage dispensing apparatus of Claim 1 wherein the pressure system further comprises a gas compressor connected with the pressure reservoir for charging the reservoir with pressurized gas prior to the dispensing apparatus being operated to dispense the beverage.
3. The apparatus of Claim 1 wherein the gas is air.
4. The apparatus of Claim 1 wherein the keg has a curved side wall and the pressurized reservoir has a curved wall adapted to surround in adjacent relation a portion of the curved side wall of the keg.
5. The apparatus of Claim 1 wherein the pressure system further comprises a pressure switch connected in fluid communication between the pressure reservoir and the keg gas valve, and the pressure switch enabling pressurized gas to flow from the reservoir into the keg through the keg gas valve when beverage is dispensed from the bag.
6. The apparatus of Claim 2 wherein the compressor continues to charge the reservoir during dispensing of the beverage from the dispensing apparatus until air pressure in the pressure reservoir reaches a predetermined pressure level.
7. The apparatus of Claim 2 wherein the compressor comprises a reciprocal pump adapted to draw gas into the pump on an intake stroke and adapted to force gas out of the pump during an out-take stroke.
8. The apparatus of Claim 7 wherein the pump has a first one-way pump valve connected to the pump to permit gas to enter the pump and a second one-way pump valve connected to the pump to permit gas to exit the pump and remain in the pressure reservoir.

9. A home beer dispensing apparatus comprising:

a keg having a self-contained bag filled with a beer;

a pressure system adapted to create a pressurized air space between the keg inner walls and the bag to assist in the dispensing of the beer from the dispensing apparatus, the pressure system comprising:

a keg one-way air valve mounted to a top wall of the keg to permit entry of pressurized air into the keg;

a pressure reservoir mounted in the apparatus outside the keg and in fluid flow communication with the keg one-way valve, the pressure reservoir storing a charge of pressurized air and being adapted to supply at least a portion of the charge of pressurized air to the keg through the keg air valve when the dispensing apparatus is operated to dispense the beverage; and,

an air compressor connected with the pressurized reservoir for charging the reservoir with pressurized air.

10. The apparatus of Claim 9 wherein the keg has a curved side wall and the pressurized reservoir has a curved wall adapted to surround in adjacent relation a portion of a curved side wall of the keg.

11. The apparatus of Claim 9 wherein the pressure system further comprises a pressure switch connected in fluid communication between the pressure reservoir and the keg air valve, and the pressure switch enabling pressurized air to flow from the reservoir into the keg through the keg air valve when beverage is dispensed from the bag.

12. The apparatus of Claim 11 wherein the compressor continues to charge the reservoir during dispensing of the beer from the dispensing apparatus until air pressure in the pressure reservoir reaches a predetermined pressure level.

13. The apparatus of Claim 9 wherein the compressor comprises a reciprocal pump adapted to draw air into the pump on an intake stroke and adapted to force air out of the pump and into the reservoir during an out-take stroke.

14. The apparatus of Claim 13 wherein the pump has a first one-way pump valve connected to the pump to permit gas to enter the pump and a second one-way pump valve connected to the pump to permit gas to exit the pump and enter the pressure reservoir.

15. An alcohol beverage dispensing apparatus comprising:

a keg having a self-contained bag filled with an alcohol beverage;

a pressure system adapted to maintain gas pressure in the keg against the bag to assist in the dispensing the beverage from the dispensing apparatus;

a dispensing device adapted to dispense beer from the bag and lower gas pressure in the keg during a normal beverage dispense cycle;

a pressure sensing system adapted to measure time rate of pressure change in the keg; and,

a signaling device responsive to the time rate of pressure change in the keg to produce a signal related to volume of beverage remaining in the bag.

16. The dispensing apparatus of Claim 15 wherein the pressure sensing system measures time rate of change of pressure drop in the keg during a normal beverage dispense cycle, and wherein the signaling device in response to the time rate of pressure drop produces the signal relating to volume of beverage remaining in the bag.

17. The dispensing apparatus of Claim 16 wherein the pressure sensing system comprises first and second pressure sensors respectively for sensing higher and lower predetermined values of pressure in the keg and respectively generating first and second pressure signals, the pressure sensing system having a controller for determining the time interval between the sequential generation of the first and second signals to determine the time rate of pressure drop in the keg.

18. The dispensing apparatus of Claim 17 wherein the first predetermined value of pressure is less than maximum pressure normally maintained in the keg by the pressure system and the second predetermined value of pressure is greater than minimum pressure reached in the keg during the normal dispense cycle.

19. The dispensing apparatus of Claim 16 wherein the first and second pressure sensors are mounted in the dispensing apparatus in pressure sensing contact with the keg outer wall to sense pressure on the keg that is related to the pressure in the keg.

20. The dispensing apparatus of Claim 15 wherein the pressure sensing system measures time rate of change of pressure rise in the keg subsequent to a normal dispense cycle, and wherein the signaling device is responsive to the time rate of pressure rise to produce the signal relating to volume of beverage remaining in the bag.

21. The dispensing apparatus of Claim 20 wherein the pressure sensing system comprises first and second pressure sensors respectively for sensing higher and lower predetermined values of pressure in the keg and respectively generating first and second pressure signals, the pressure sensing system having a controller for determining the time interval between the sequential generation of the second and first to determine the time rate of pressure rise in the keg.

22. The dispensing apparatus of Claim 21 wherein the first predetermined value of

pressure is less than maximum pressure normally maintained in the keg by the pressure system and the second predetermined value of pressure is greater than minimum pressure reached in the keg during the normal dispense cycle.

23. The dispensing apparatus of Claim 20 wherein the first and second pressure sensors are mounted in the dispensing apparatus in pressure sensing contact with the keg outer wall to sense pressure on the keg associated with the pressure in the keg.

24. The dispensing apparatus of Claim 15 wherein the apparatus comprises a home beer dispensing apparatus for dispensing a beer beverage.

25. The dispensing apparatus of Claim 16 wherein the apparatus comprises a home beer dispensing apparatus for dispensing a beer beverage.

26. The dispensing apparatus of Claim 20 wherein the apparatus comprises a home beer dispensing apparatus for dispensing a beer beverage.

27. The dispensing apparatus of Claim 15 wherein the signaling device comprises a display mounted on the apparatus providing a visual indication of the volume of beverage remaining in the bag.

28. The dispensing apparatus of Claim 16 wherein the signaling device comprises a display mounted on the apparatus providing a visual indication of the volume of beverage remaining in the bag.

29. The dispensing apparatus of Claim 20 wherein the signaling device comprises a display mounted on the apparatus providing a visual indication of the volume of beverage remaining in the bag.

30. An alcohol beverage dispensing apparatus comprising:  
a keg having a self-contained bag filled with an alcohol beverage;  
a pressure system adapted to maintain a gas pressure in the keg against the bag to assist in the dispensing of the beverage from the dispensing apparatus, the pressure system comprising:

a keg gas valve mounted to the keg to permit entry of pressurized gas into the keg;

a pressure reservoir mounted in the apparatus outside the keg and in fluid flow communication with the keg gas valve, the pressure reservoir storing a charge of pressurized gas and being adapted to supply at least a portion of the charge of pressurized gas into the keg through the keg gas valve when the dispensing apparatus is operated to dispense the beverage;

a dispensing device adapted to dispense beer from the bag and lower gas pressure in the keg during a normal beverage dispense cycle;

a pressure sensing system adapted to measure time rate of pressure change in the keg;  
and,

a signaling device responsive to the time rate of pressure change in the keg to produce a signal related to volume of beverage remaining in the bag.

31. The alcohol beverage dispensing apparatus of Claim 30 wherein the pressure system further comprises a gas compressor connected with the pressure reservoir for charging the reservoir with pressurized gas prior to the dispensing apparatus being operated to dispense the beverage.

32. The apparatus of Claim 31 wherein the compressor continues to charge the reservoir during dispensing of the beverage from the dispensing apparatus until air pressure in the pressure reservoir reaches a predetermined pressure level.

33. The apparatus of Claim 30 wherein the pressure system further comprises a pressure switch connected in fluid communication between the pressure reservoir and the keg gas valve, and the pressure switch enabling pressurized gas to flow from the reservoir into the keg through the keg gas valve when beverage is dispensed from the bag.

34. A home beer dispensing apparatus comprising:

a keg having a self-contained bag filled with a beer;

a pressure system adapted to create a pressurized air space between the keg inner walls and the bag to assist in the dispensing of the beer from the dispensing apparatus, the pressure system comprising:

a keg one-way air valve mounted to a top wall of the keg to permit entry of pressurized air into the keg;

a pressure reservoir mounted in the apparatus outside the keg and in fluid flow communication with the keg one-way valve, the pressure reservoir storing a charge of pressurized air and being adapted to supply at least a portion of the charge of pressurized air to the keg through the keg air valve when the dispensing apparatus is operated to dispense the beverage;

an air compressor connected with the pressurized reservoir for charging the reservoir with pressurized air;

a dispensing device adapted to dispense beer from the bag and lower gas pressure in the keg during a normal beverage dispense cycle;

a pressure sensing system adapted to measure time rate of pressure change in the keg;  
and,

a signaling device responsive to the time rate of pressure change in the keg to produce

a signal related to volume of beverage remaining in the bag.

35. The apparatus of Claim 34 wherein the pressure system further comprises a pressure switch connected in fluid communication between the pressure reservoir and the keg air valve, and the pressure switch enabling pressurized air to flow from the reservoir into the keg through the keg air valve when beverage is dispensed from the bag.

36. The apparatus of Claim 35 wherein the compressor continues to charge the reservoir during dispensing of the beer from the dispensing apparatus until air pressure in the pressure reservoir reaches a predetermined pressure level.

37. The dispensing apparatus of Claim 30 wherein the signaling device comprises a display mounted on the apparatus providing a visual indication of the volume of beverage remaining in the bag.

38. The dispensing apparatus of Claim 31 wherein the signaling device comprises a display mounted on the apparatus providing a visual indication of the volume of beverage remaining in the bag.